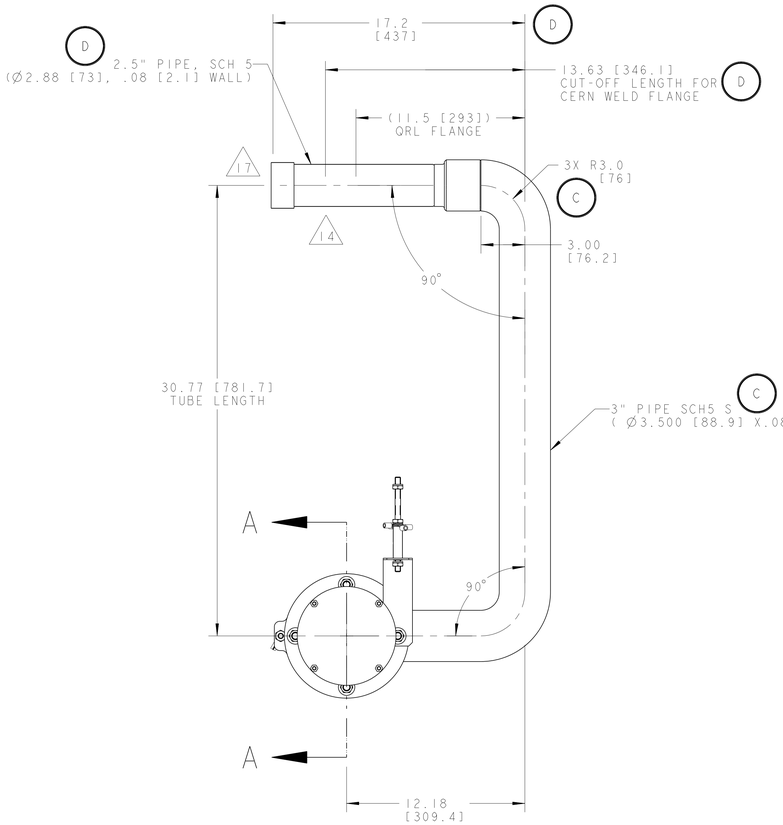
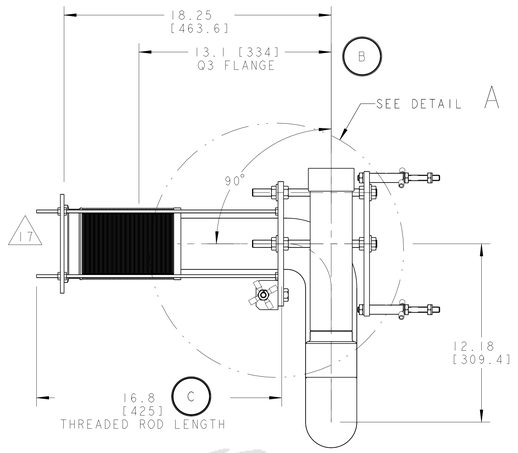
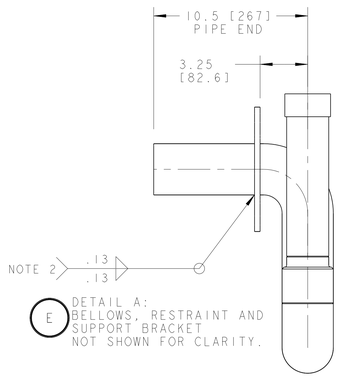
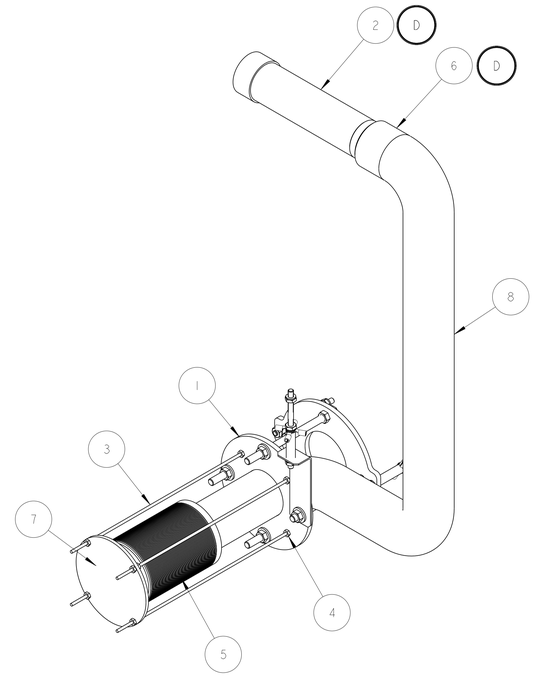
NOTES: (UNLESS OTHERWISE SPECIFIED)

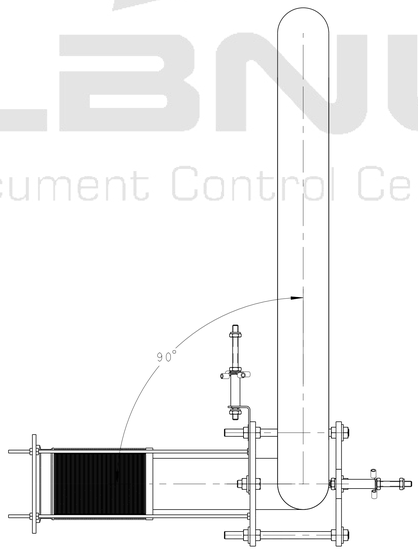
1. THIS IS A CRYOGENIC VACUUM COMPONENT.
2. WELDING PROCEDURE: PER VENDOR SPECIFICATION WITH LBNL APPROVAL.
3. CLEANING PROCEDURE : PER VENDOR SPECIFICATION WITH LBNL APPROVAL.
4. PACKAGING AND STORAGE PROCEDURE OF THE COMPONENTS: PER VENDOR SPECIFICATION WITH LBNL APPROVAL.
5. DIMENSIONS AND TOLERANCING PER ANSI Y14.5M-1982. UNITS ARE IN INCHES [mm] UNLESS OTHERWISE SPECIFIED.
6. USE OF SULFUR OR SILICONE BEARING OILS, LUBRICANTS, OR COOLANTS ARE STRICTLY PROHIBITED.
7. USE OF RESIN OR RUBBER BONDED ABRASIVES UNDER POWER IS STRICTLY PROHIBITED. USE VITREOUS BONDED ABRASIVES ONLY.
8. VENDOR SUGGESTED CHANGES TO WELD PREPS; SUBJECT TO LBNL APPROVAL.
9. FITTINGS MAY BE USED IN PLACE OF BENDS; SUBJECT TO LBNL APPROVAL.
10. VENDOR SUGGESTED CHANGES TO TOLERANCES TO FACILITATE FABRICATION OR ASSEMBLY; SUBECT TO LBNL APPROVAL.
11. REMOVE ALL THE BURRS AND REAM THE ENDS FOR CIRCULARITY AND CLEAN ENDS.
12. TUBE END SURFACE MUST BE PERPENDICULAR TO THE TUBE AXIS WITHIN +/-.010.
13. PERFORM ACCEPTANCE TESTS PER LBNL SPECIFICATION M989. (B)
14. A MARK DESIGNATING THE CUT-OFF LENGTH WILL BE UTILIZED DURING FINAL INSTALLATION OF THE FEEDBOX ASSEMBLY. MARK, SCRIBE OR ETCH THIS LOCATION IN A PERMANENT MANNER, SUBJECT TO LBNL APPROVAL, TO AN ACCURACY OF ±0.063".
15. PROVIDE A MINIMUM LENGTH OF 4.0" OF STRAIGHT, SMOOTH PIPE ON THE INDICATED SIDE OF THE INSTALLED LENGTH MARK FOR PIPE WELDING DURING FINAL INSTALLATION OF THE FEEDBOX ASSEMBLY.
16. PIPE MUST BE STRAIGHT AND SMOOTH (NO BUMPS) FOR 1.5" ON EITHER SIDE OF THE CENTER-PLANE OF THE SUPPORT. (B)
17. CAP BOTH ENDS OF PIPE TO FACILITATE ACCEPTANCE TESTS. (B)

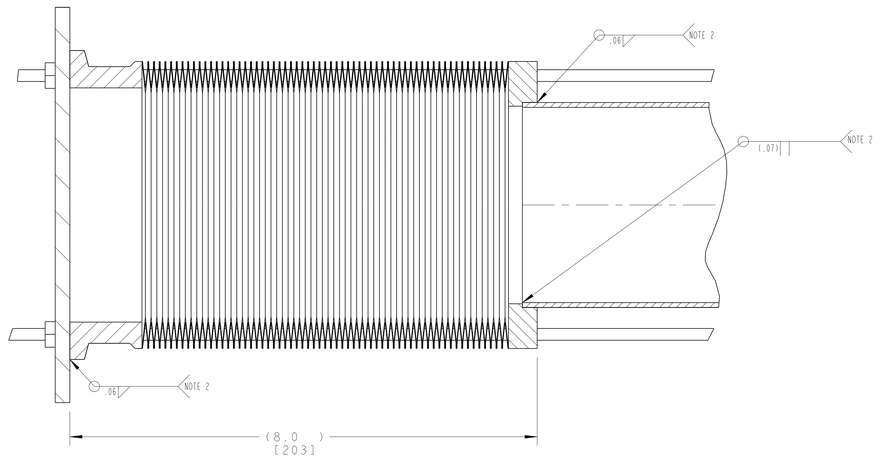












SECTION A-A
SCALE 1/1

THIRD ANGLE PROJECTION

REV	DWG	CHK	ZONE	DATE	CHANGES
E	RLM	JPZ		2/11/04	ADD DETAIL VIEW A AND CLARIFYING DIMS. VISUAL CHANGES TO THRUST PLATE ASSY 25M923. REMOVE END FLANGE FROM BOM - IT IS INCLUDED IN BELLOWS WELDMENT FNAL# 5520-MB-390073.
D	RLM	JPZ		12/8/03	NEW TRANSITION AT QRL, REPLACE INSTALLED LENGTH 17.21 AT QRL WITH CUT-OFF LENGTH 13.63 17.2 WAS 21.2
C	RLM	JER		6/9/03	CHANGED 3.5"TUBE TO 3"PIPE, R3 WAS R3.5 ADDED THREADED ROD LENGTH
B	ARH	SPV		01/07/03	REVISED DRAWING NOTES 13, 16 & 17, CHANGED DIM CALLOUT TO Q3 FLANGE FROM QRL FLANGE, MINOR DRAWING DIMENSIONAL CHANGES, REMOVED THREADED ROD FROM BOM, REMOVED 5" PIPE CAP FROM BELLOWS END
A	ARH	SPV		10-25-02	INITIAL RELEASE

UNLESS OTHERWISE SPECIFIED
TOLERANCES: X.X ± 0.1 FRAC. ± 1/64; X.XX ± 0.03 Angles ± 1.00°; X.XXX ± 0.010 FINISH
DO NOT SCALE PRINT
THREADS ARE CLASS 2
CHAMFER ENDS OF ALL SCREW THREADS 30°
CUT ROUND, 1.5 THREAD RELIEF ON MACHINED THREADS
BREAK EDGES .016 MAX. ON MACHINED WORK
REMOVE BURRS, WELD SPLATTER & LOOSE SCALE
IN ACCORDANCE WITH ASME Y14.5M & B46.1

ITEM	PART NO	REQD	DESCRIPTION	MATERIAL
8	-	1	PIPE, PER ASTM A312	SS 316L
7	-	1	1/4" PLATE	SS 304L
6	25M981	1	TRANSITION Ø3.5" TO Ø2.875"	SS 304L
5	-	1	BELLOWS, FNAL# 5520-MB-390073	SS 300 SERIES
4	-	12	1/4-20 HEX NUT	18-8 SS
3	-	4	1/4-20 THREADED ROD	18-8 SS
2	-	1	PIPE, PER ASTM A269	-
1	25M923	1	XB THRUST PLATE ASSY	-

SHOP ORDERS
ACC NO. / REQD
DEL TO
SURFACE TREATMT
IDENT METHOD / TAG
PROJECT NUMBER N/A
PROJECT NAME N/A
DWN M KNOLLS — DATE 13-Mar-02
CHK S.Virostek — DATE 25-Oct-02
APP BY Jon Zbasnik/D.OSHATZ — DATE 28-Sep-02

ERNEST ORLANDO LAWRENCE BERKELEY NATIONAL LABORATORY
UNIVERSITY OF CALIFORNIA - BERKELEY

LHC IR FEEDBOX
CRYOGENICS
PIPE WELDMENT, XB DFBXB

MICROFILMED: PATENT CLEAR:
DWG. TYPE: ASSEM
SHOWN ON: -
SCALE: 1/4 DO NOT SCALE PRINTS
SHEET 1 OF 1
DESIGN ACCT. NO.: Z5LCE2
CATEGORY CODE: LH2003
DWG. NO.: 25I5306
SIZE: E
REV:

DWG. NO. 25I5306 SIZE E SH 1